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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/072,739   | 02/08/2002  | Douglas H. Werner    | 19264.0007U2        | 2986             |
| 23859  | 7590        | 12/29/2005           | EXAMINER            |                  |
| NEEDLE & ROSENBERG, P.C.<br>SUITE 1000<br>999 PEACHTREE STREET<br>ATLANTA, GA 30309-3915 |             |                      | HO, TAN             |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2821                |                  |

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/072,739             | WERNER ET AL.       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Tan Ho                 | 2821                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 39-60 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10, 20-25 and 27 is/are rejected.
- 7) ☒ Claim(s) 7, 11-19, 26 and 30-38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**TAN HO**  
**PRIMARY EXAMINER**

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/02; 1/03; 5/03; 10/03</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 3, 5, 8, 11, 15-17, 19, 22, 24-27, 29, 40, 41, 51, and 52 are objected to because of the following informalities: In claims 3, 5, 7, 10, 15-17, 19, 22, 24-26, 29, 40, 41, 51, and 52 "a genetic algorithm" should be change to --the genetic algorithm-- if it is the genetic algorithm defined in claims 1, 20, 39, and 50. In claims 8, 11, and 27 "a simple antenna" should be change to --the simple antenna-- if it is the simple antenna defined in claims 1, 20. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. Claims 6, 7, 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 6, 7, 25, and 26, the recitation "further comprising applying a genetic algorithm" is not clear because the step applying genetic algorithm is already defined in the independent claims 1 and 20.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, 8-10, 16, 20-25, 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Altshuler et al (US 5,719,794).

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Altshuler et al disclose a process for the design of antennas using genetic algorithms comprising the steps of specifying the electromagnetic properties of the desired antenna, selecting a genetic algorithm, and the genetic algorithm proceeding to obtain an optimized design for an antenna, see figures 1 and 2, the abstract, and column 2, line 40 through column 3, line 41.

***Allowable Subject Matter***

5. Claims 7, 11-15, 17-19, 31-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 39-60 are allowed.

Claims 39 and 50 recite method and system for creating a pattern of electromagnetic materials on a substrate or superstrate for forming at least one frequency selective surface. The patent to Altshuler et al fails to teach the frequency selective surface formed on a substrate.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Ho whose telephone number is (571) 272-1822. The examiner can normally be reached on M-F (8:00AM - 5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**TAN HO**  
**PRIMARY EXAMINER**